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**REVOCATION OF POWER OF  
ATTORNEY WITH  
NEW POWER OF ATTORNEY  
AND  
CHANGE OF CORRESPONDENCE ADDRESS**

Application Number	10/723,382
Filing Date	November 25, 2003
First Named Inventor	Gordon Munns
Art Unit	2815
Examiner Name	Warren, Matthew E.
Attorney Docket Number	3165.41USU1 (APA0003/US)

**I hereby revoke all previous powers of attorney given in the above-identified application.**☐ A Power of Attorney is submitted herewith.**OR**☒ I hereby appoint the practitioners associated with the Customer Number:

33072

☒ Please change the correspondence address for the above-identified application to:☒ The address associated with  
Customer Number:

33072

**OR**☐ Firm or  
Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the:

☐ Applicant/Inventor.☒ Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)**SIGNATURE of Applicant or Assignee of Record**

Signature

Name

Anil K. Jain, President

Date

June 1, 2005

Telephone

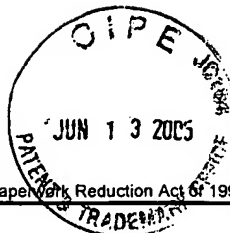
763-784-4995

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ \*Total of 2 forms are submitted.

This collection of information is required by 37 CFR 1.36. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PTO/SB/96 (09-04)  
Approved for use through 07/31/2006. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

**STATEMENT UNDER 37 CFR 3.73(b)**

Applicant/Patent Owner: Gordon Munns

Application No./Patent No.: 10/723,382 Filed/Issue Date: November 25, 2003

Entitled: SUPER LATTICE MODIFICATION OF OVERLYING TRANSISTOR

APA Enterprises, Inc., a corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.  
The extent (by percentage) of its ownership interest is \_\_\_\_\_ %

in the patent application/patent identified above by virtue of either:

A ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

B ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: Gordon Munns To: APA Optics, Inc.  
The document was recorded in the United States Patent and Trademark Office at  
Reel 015454, Frame 0550, or for which a copy thereof is attached.
2. From: APA Optics, Inc. To: APA Enterprises, Inc.  
The document was recorded in the United States Patent and Trademark Office at  
Reel 015991, Frame 0449, or for which a copy thereof is attached.
3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.  
[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Anil K. Jain  
Signature

June 1, 2005  
Date

Anil K. Jain

Printed or Typed Name

763-784-4995

Telephone Number

President

Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**UNITED STATES PATENT AND TRADEMARK OFFICE**

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

DECEMBER 15, 2004

PTAS



\*102767975A\*

MERCHANT & GOULD, P.C.  
ANNA M. NELSON  
P.O. BOX 2903  
MINNEAPOLIS, MN 55402-0903

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RECORDATION DATE: 06/14/2004

REEL/FRAME: 015454/0550

NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

MUNNS, GORDON

DOC DATE: 05/05/2004

ASSIGNEE:

APA OPTICS, INC.  
2950 NE 84TH LANE  
BLAINE, MINNESOTA 55449

SERIAL NUMBER: 10723382

FILING DATE: 11/25/2003

PATENT NUMBER:

ISSUE DATE:

TITLE: SUPER LATTICE MODIFICATION OF OVERLYING TRANSISTOR

015454/0550 PAGE 2

TARA WASHINGTON, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

FORM PTO-1595

(Rev. 6-93)

OMB No. 0651-0011 (exp. 4/94)

M&G-3165.41USU1



06-16-2004



102767975

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

To the Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Gordon Munns

6.14.04

2. Name and address of receiving party(ies):

APA Optics, Inc.  
2950 NE 84th Lane  
Blaine, Minnesota 55449

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

Additional name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of conveyance:

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other:

Execution Date: May 5, 2004

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

10/723,382

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Anna M. Nelson  
Address: Merchant & Gould P.C.  
P.O. Box 2903  
Minneapolis, MN 55402-0903

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$40.00  
☒ Enclosed  
☐ Authorized to be charged to deposit account

8. Please charge any additional fees or credit any overpayments to our Deposit account number: 13-2725

DO NOT USE THIS SPACE

9. Statement and signature:

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Anna M. Nelson

Name of Person Signing

Signature

June 10, 2004

Date

Total number of pages including cover sheet, attachments, and document: 3

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Mail documents to be recorded with required cover sheet information to:

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Director - U.S. Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

06/16/2004 EDOOPER 00000004 10723382

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40.00 OP

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23552

PATENT TRADEMARK OFFICE

**ASSIGNMENT**

WHEREAS, I, Gordon Munns, residing at 7745 341st Street, Stacy, MN 55079, made certain new and useful inventions and improvements for which I filed an application for Letters Patent of the United States on November 25, 2003, application Serial No. 10/723,382 which is entitled Super Lattice Modification of Overlying Transistor.

AND WHEREAS, APA Optics, Inc., a corporation organized and existing under and by virtue of the laws of the State of Minnesota, and having an office and place of business at 2950 NE 84th Lane, Blaine, MN 55449 (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW THEREFORE, to all whom it may concern, be it known that for and in consideration of the sum of One Dollar and other good and valuable considerations, the receipt and sufficiency whereof is hereby acknowledged, I have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and I do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the Assignee, its successors and assigns.

AND, for the consideration aforesaid, I do hereby agree that I and my executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to me relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire

right, title and interest in and to the improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore I covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me and that full right to convey the same as herein expressed is possessed by me.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 5 day of May, 2004.

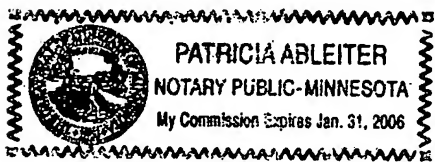
Gordon Munns  
Gordon Munns

STATE OF Minnesota )  
COUNTY OF Ramsey ) ss.

On this 5<sup>th</sup> day of May, 2004, before me personally appeared Gordon Munns to me known and known to me to be the person described in and who executed the foregoing instrument, and he duly acknowledged to me that he executed the same for the uses and purposes therein set forth.

[SEAL]

Patricia Ableiter  
Notary Public





UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231



\*700167218A\*

MAY 11, 2005

PTAS

BRIAN H. BATZLI  
MERCHANT & GOULD P.C.  
P.O. BOX 2903  
MINNEAPOLIS, MN 55402-0903

UNITED STATES PATENT AND TRADEMARK OFFICE  
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RECORDATION DATE: 04/04/2005

REEL/FRAME: 015991/0449  
NUMBER OF PAGES: 3

BRIEF: CHANGE OF NAME (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

APA OPTICS, INC.

DOC DATE: 08/20/2004

ASSIGNEE:

APA ENTERPRISES, INC.  
2950 NE 84TH LANE  
BLAINE, MINNESOTA 55449

SERIAL NUMBER: 10257457

FILING DATE: 04/15/2003

PATENT NUMBER:

ISSUE DATE:

TITLE: DEVICE AND METHOD FOR ULTRAVIOLET RADIATION MONITORING

SERIAL NUMBER: 60616453

FILING DATE: 10/05/2004

PATENT NUMBER:

ISSUE DATE:

TITLE: METHOD AND APPARATUS FOR A PHOTODETECTOR RESPONSIVE OVER A SELECTABLE WAVELENGTH RANGE



015991/0449 PAGE 2

SERIAL NUMBER: 10723382 FILING DATE: 11/25/2003  
PATENT NUMBER: ISSUE DATE:  
TITLE: SUPER LATTICE MODIFICATION OF OVERLYING TRANSISTOR

SERIAL NUMBER: 60562458 FILING DATE: 04/15/2004  
PATENT NUMBER: ISSUE DATE:  
TITLE: HIGH EFFICIENCY, SOLAR-DRIVEN HYDROGEN GENERATION

SERIAL NUMBER: 06843775 FILING DATE: 03/25/1986  
PATENT NUMBER: 4759595 ISSUE DATE: 07/26/1988  
TITLE: INTEGRATED OPTIC SWITCH

SERIAL NUMBER: 07701792 FILING DATE: 05/17/1991  
PATENT NUMBER: 5192987 ISSUE DATE: 03/09/1993  
TITLE: HIGH ELECTRON MOBILITY TRANSISTOR WITH GAN/ALXGAL-XN HETEROJUNCTIONS

SERIAL NUMBER: 07895350 FILING DATE: 06/08/1992  
PATENT NUMBER: 5278435 ISSUE DATE: 01/11/1994  
TITLE: HIGH RESPONSIVITY ULTRAVIOLET GALLIUM NITRIDE DETECTOR

SERIAL NUMBER: 08482642 FILING DATE: 06/07/1995  
PATENT NUMBER: 5608826 ISSUE DATE: 03/04/1997  
TITLE: WAVELENGTH DIVISION MULTIPLEXED OPTICAL MODULATOR AND MULTIPLEXING METHOD USING SAME

SERIAL NUMBER: 09191575 FILING DATE: 11/13/1998  
PATENT NUMBER: 6441934 ISSUE DATE: 08/27/2002  
TITLE: MULTIPLEXER AND DEMULTIPLEXER FOR SINGLE MODE OPTICAL FIBER COMMUNICATION LINKS

SERIAL NUMBER: 07649670 FILING DATE: 02/01/1991  
PATENT NUMBER: 5146465 ISSUE DATE: 09/08/1992  
TITLE: ALUMINUM GALLIUM NITRIDE LASER

SERIAL NUMBER: 08026528 FILING DATE: 03/03/1993  
PATENT NUMBER: 5296395 ISSUE DATE: 03/22/1994  
TITLE: METHOD OF MAKING A HIGH ELECTRON MOBILITY TRANSISTOR

SERIAL NUMBER: 08014418 FILING DATE: 02/05/1993  
PATENT NUMBER: 5477383 ISSUE DATE: 12/19/1995  
TITLE: OPTICAL ARRAY METHOD AND APPARATUS

SERIAL NUMBER: 08769459 FILING DATE: 12/18/1996  
PATENT NUMBER: 5793912 ISSUE DATE: 08/11/1998  
TITLE: TUNABLE RECEIVER FOR A WAVELENGTH DIVISION MULTIPLEXING OPTICAL APPARATUS AND METHOD

SERIAL NUMBER: 09361048 FILING DATE: 07/26/1999  
PATENT NUMBER: 6647209 ISSUE DATE: 11/11/2003  
TITLE: MULTIPLEXER AND DEMULTIPLEXER FOR SINGLE MODE OPTICAL FIBER COMMUNICATION LINKS

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M&G INTL  
PAGE 004/008

Fax Server

PAGE 04

015991/0449 PAGE 3

SERIAL NUMBER: 07906242  
PATENT NUMBER: 5321713  
TITLE: ALUMINUM GALLIUM NITRIDE LASER

FILING DATE: 06/29/1992  
ISSUE DATE: 06/14/1994

SERIAL NUMBER: 07755510  
PATENT NUMBER: 5182670  
TITLE: NARROW BAND ALGAN FILTER

FILING DATE: 08/30/1991  
ISSUE DATE: 01/26/1993

SERIAL NUMBER: 08257083  
PATENT NUMBER: 5450510  
TITLE: WAVELENGTH DIVISION MULTIPLEXED OPTICAL MODULATOR AND MULTIPLEXING  
METHOD USING SAME

FILING DATE: 06/09/1994  
ISSUE DATE: 09/12/1995

SERIAL NUMBER: 09206328  
PATENT NUMBER: 6104074  
TITLE: SCHOTTKY BARRIER DETECTORS FOR VISIBLE-BLIND ULTRAVIOLET DETECTION

FILING DATE: 12/08/1998  
ISSUE DATE: 08/15/2000

THERESA FREDERICK, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

04/04/2005  
700167218

RECORDATION FORM COVER SHEET  
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U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

FORM PTO-1095  
(Rev. 6-93)  
OMB No. 0651-0011 (exp. 6-94)  
M&G-3149.D-00-07

To the Commissioner of Patents and Trademarks: Please enclose the attached original documents or copy thereof.

1. Name of conveying party(ies):  
2. Name and address of receiving party(ies):

APA Optics, Inc.

APA Enterprises, Inc.  
2950 NE 84th Lane  
Blaine, Minnesota 55449  
USA

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

Additional name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of conveyance:  
☐ Assignment  
☐ Security Agreement  
☐ Other:  
☒ Merger  
☒ Change of Name

Execution Date: August 20, 2004

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

B. Patent No.(s)

See Attachment A

Additional numbers attached? ☒ Yes ☐ No

5. Name and address of party to whom correspondence concerning documents should be mailed: 6. Total number of applications and patents involved: 18

Name: Brian H. Bazell  
Address: Merchant & Gould P.C.  
P.O. Box 1903  
Minneapolis, MN 55402-0903

7. Total fee (37 CFR 3.41): \$720.00  
☐ Enclosed  
☒ Authorized to be charged to deposit account

8. Please charge any additional fees or credit any overpayments to our Deposit account number: 13-2725

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9. Statement and signature:

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Brian H. Bazell  
Name of Person Signing

Signature

April 4, 2005  
Date

Total number of pages including cover sheet, attachments, and document: 3

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Alexandria VA 22313-1450

23552  
PATENT TRADEMARK OFFICE

CERTIFICATE UNDER 37 CFR 1.64(b) I hereby certify that this paper is being transmitted by facsimile (703 306 3005) to the U.S. Patent and Trademark Office on April 4, 2005.

By: [Signature]  
Name: Brian H. Bazell

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**Attachment A**

1. **Name of Conveying Part(ies):** APA Optics, Inc.
2. **Name and Address of Receiving Part(ies):** APA Enterprises, Inc.
3. **Nature of Conveyance:** Change of Name

**U.S. Patents No.(s)**

4,759,595	5,146,465	5,321,713
5,192,987	5,296,395	5,182,670
5,278,435	5,477,383	5,450,510
5,608,826	5,793,912	6,104,074
6,441,934	6,647,209	

**Patent Application No.(s)**

10/257,457	10/723,382	60/562,458
60/616,453		

Our Ref: M&G 3165.0-00-07  
BBatzli:dc